SECTION VII.—WEATHER AND DATA FOR THE MONTH.

THE WEATHER OF THE MONTH.

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Pressure.—The distribution of the mean atmospheric pressure over the United States and Canada, and the prevailing direction of the winds, are graphically shown on Chart VII, while the average values for the month at the several stations, with the departures from the normal, are shown in Tables I and III.

The atmospheric pressure for the month as a whole was above the normal over the Dakotas, northern Minnesota, nearly all sections to eastward of the Mississippi River, and over the extreme southern sections to the westward of that river as well as in the eastern Canadian Provinces, the greatest plus departures appearing in northern New England and the Canadian Maritime Provinces. Over all other portions of the country the means for the month were below the normal, with especially marked departures in the far Northwest, and portions of Nevada and California.

The month opened with low pressure prevailing quite generally throughout the country, except along the Canadian border east of the Rocky Mountains. The well-defined low area that crossed the country during the first decade was followed by rather marked and extensive high pressure, which covered most districts, except the States west of the Rocky Mountains, where the pressure was below the normal. Relatively low pressure again overspread the greater part of the country during the early part of the second decade, which, in turn, was followed by another rather extensive high, which obtained in most sections the latter part of this period, except over the Pacific Slope and extreme southwest, where low pressures predominated. A series of low-pressure areas crossed the country during the third decade, causing unsettled weather conditions until near the end of the month, which closed with generally high pressure over all sections except the New England, Gulf, and Pacific States.

The distribution of the prevailing high and low pressure areas was generally favorable for northerly and northwesterly winds along the seaboard of the New England and middle Atlantic States, northerly and northeasterly winds over the south Atlantic States, including the Florida Peninsula, and for southeasterly winds in the Mississippi Valley, and the Gulf, and Pacific Coast States.

Temperature.—The warm wave that had overspread much of the country during the last day or two of January continued into February, with somewhat higher temperatures in eastern districts but with cooler weather in the Plains region. Only moderate changes in temperatures occurred during the following week or more over the central and western districts, but in the North Atlantic States the changes were quite pronounced, especially during the 1st and 2d and again on the 5th and 6th.

For the first decade as a whole the temperatures were very generally above the normal in all central and northern districts, but over the southern States the period was only moderately warm and in portions of the south Atlantic and east Gulf States and in the far Southwest the averages were somewhat below the normal.

During the middle decade of the month temperatures continued moderately high in most districts and they were unseasonably high in some eastern districts about the 13th and 14th. The decade as a whole, like the preceding, continued warm over all central and northern districts; and like the first decade it was cool over the Southeast and the far Southwest. In the central valleys the period was one of unusual warmth, the averages ranging from 10° to nearly 15° above the normal.

At the beginning of the third decade the temperature was high in practically all portions of the country and during the following few days it continued to rise in the eastern districts, the maximum temperatures about the 23d and 24th being within a few degrees of the highest ever recorded in February at points from the lower Lake region eastward.

During the last few days of the month there was a very general tendency to lower temperatures over most districts, especially in the northeastern States, but elsewhere the daily changes were slight and the month closed with moderately cool weather prevailing over all portions of the country.

The month as a whole may be classed as one of unusual warmth over all northern districts, and especially so in the Upper Lake region and in the Missouri and upper Mississippi valleys, where the positive departures ranged from 8° to 10°. In limited portions of the southeastern States and locally in the far Southwest the averages for the month were slightly less than the normal.

The extremes were within the limits of previous years, although the maximum temperatures over some of the eastern districts on several dates were near the highest previously recorded in February.

Minimum temperatures did not closely approach the low records of previous years, and there were extensive areas in Texas and other Gulf States, as well as on the Pacific coast, that were free from frost during the entire month. Considerable areas in New York and New England had minimum temperatures below zero, the lowest being −14° at Greenville, Me. This record was several degrees below any reported from the northwestern States, where the temperatures are usually considerably lower than in New England.

Precipitation.—The storm referred to in the January issue as central in the Mississippi Valley gradually overspread the districts to the eastward during the following few days, accompanied by heavy rains in the Ohio Valley and portions of the Gulf States, and heavy snow and sleet in portions of the upper Mississippi Valley, Lake region, and New England. During the prevalence of this storm over the eastern districts a severe storm had approached the Pacific coast and heavy rains occurred in portions of California and Oregon and more or less snow in the mountains of those States.

The heavy rains with melting snow over the Ohio watershed caused decided rises in the rivers of that dis-

trict and the main stream was at flood stages for several days from Pittsburgh to Cairo.

The Pacific coast storm lost much of its intensity after passing inland but apparently reestablished its identity to the eastward of the Rocky Mountains, and by the morning of the 4th was central in the lower Missouri Valley, whence it moved during the following few days to the Lake region and St. Lawrence Valley. Some heavy rains occurred from this storm in portions of the Gulf States and moderate rains or snows were very general from the Great Plains eastward.

Generally fair weather prevailed over much of the country after the passage of the above-mentioned storm until about the 12th, when a disturbance appeared over the southern Rocky Mountain region and moved to the Great Lakes during the following two or three days. Considerable snow occurred in the northern and western areas of the storm track and moderately heavy rains fell over most eastern and southern districts.

But little precipitation occurred over the central and western districts from the 15th to the 20th. About the latter date, however, unsettled weather developed in the far Southwest, and by the morning of the 21st low pressure was general from the middle Mississippi Valley westward, and light rains or snows were falling over most of the region. This storm gradually overspread the districts to eastward of the Mississippi during the following few days, and local heavy rains fell at points in the lower Mississippi Valley, Gulf States, and in the Atlantic coast districts. Heavy, wet snows occurred in portions of Kansas, Iowa, and surrounding States, greatly damaging telegraph and telephone lines and interfering with railroad traffic.

After the passage of this storm, fair weather was general during the balance of the month in most districts until near the end, when light snows occurred over much of the mountain and plateau regions, extending into the middle Plains, with light rains over large portions of the Gulf States.

The precipitation for the month was deficient over much of the central and southern portions of the country from the Mississippi Valley eastward, and in excess of the average over similar districts to the westward of that river. Marked deficiencies occurred in the lower Ohio Valley, portions of the Gulf and South Atlantic States, and the far Northwest, while excesses were equally pronounced in some of the Northeastern States, the middle portions of the Great Plains region, California, and portions of the far Southwest.

In general the precipitation was sufficient for present needs, and the soil being largely free from frost offered unusual opportunity for the moisture to penetrate well into the subsoil.

Snowfall.—In general the snowfall during the month was much less than the average, this being especially true for the districts to eastward of the Mississippi and in the northern mountain regions of the West. Some heavy falls occurred in the Plains region from Kansas and Iowa northward, and in portions of the southern Rocky Mountain districts and the high ranges of California.

In the mountain districts of Montana, Idaho, Washington, Oregon, and portions of Utah and Wyoming the total fall for the winter has so far been much less than the average, and the outlook is for a decided shortage of irrigation water for the late summer. On the other hand the fall in California, and portions of Nevada, Arizona, New Mexico, and southern Utah has been in excess of the normal, and much of it is well packed and in condition to justify a forecast for an abundant supply of water during the coming crop-growing season.

At the end of the month the snow had largely disappeared and only small amounts remained on the ground where it was covered at all, save in portions of the upper Lake region, in parts of the Dakotas, Nebraska, Iowa, and Minnesota, and in the higher elevations of the mountain districts of the West.

GENERAL SUMMARY.

The month as a whole presented unusual opportunities for the successful prosecution of most outdoor pursuits. Warm and fair weather prevailed over large portions of the country for lengthy periods, and the general absence of frost in the soil permitted an unusual amount of plowing and other preparation of the soil for spring planting. In the winter-grain growing regions the snow had largely disappeared early in the month leaving the soil well saturated and the growing crop in good condition save over some of the more eastern districts where alternate freezing and thawing caused some injury to both wheat and grass.

In the cotton-growing States the favorable weather permitted excellent progress with farming operations and the season was well advanced, except in portions of the middle Gulf States where the ground was generally too wet. Winter crops were reported to have made good growth and some early truck planting has been accomplished. The outlook for fruit appeared excellent at the end of the month and peaches were in blossom over the southern districts.

In the western districts the weather was unusually favorable for the live-stock interests, and cattle were reported to be in excellent condition.

In the northern mountain districts the streams were unusually low, and the absence of any large amount of snow in the mountains indicated that their volume would be less than usual during the coming summer. On the other hand water was plentiful in the southern mountain districts and their streams will probably carry an abundance of water.

Maximum wind velocities, February, 1915.

Stations.	Date.	Velocity.	Direction.	Stations.	Date.	Velocity.	Direction.
		Mi./hr.				*Mi./hr.*	
Block Island, R. I.	2	56	ne.	North Head, Wash.—Continued	6	54	se.
Do	26	59	nw.	Do	8	75	se.
Do	27	58	w.	Do	9	64	se.
Buffalo, N. Y.	6	50	sw.	Pensacola, Fla.	5	52	s
Do	7	50	sw.	Pt. Reyes Light, Cal.	1	91	s.
Cheyenne, Wyo.	3	52	w.	Do	2	95	sw.
Do	4	50	nw.	Do	3	65	nw.
Do	5	50	nw.	Do	7	88	s.
El Paso, Tex.	21	52	sw.	Do	8	88	s.
Green Bay, Wis.	1	51	ne.	Do	15	68	s.
Hatteras, N. C.	18	51	n.	Do	16	64	s.
Lincoln, Nebr.	5	52	nw.	Do	20	57	nw.
Marquette, Mich.	10	50	sw.	Do	21	56	s.
Modena, Utah	2	73	sw.	Do	22	58	s.
Mt. Tamalpais, Cal.	2	68	sw.	Do	24	73	nw.
Do	7	56	se.	Do	25	65	nw.
Do	8	64	sw.	Do	26	50	nw.
Do	16	50	sw.	Do	28	60	nw.
Do	27	52	nw.	Reno, Nev.	7	50	s.
Do	28	58	nw.	Sacramento, Cal.	8	57	se.
New York, N. Y.	5	52	se.	San Francisco, Cal.	2	51	sw.
Do	6	60	se.	Sioux City, Iowa	5	55	nw.
Do	24	50	se.	Do	14	53	nw.
Do	26	57	nw.	Tatoosh Island, Wash	1	54	s.
Do	27	56	nw.	Do	5	58	s.
North Head, Wash.	3	62	se.	Do	14	50	s.
Do	4	54	se.	Do	15	50	s.
Do	5	60	se.	Wichita, Kans.	4	50	sw.

Average accumulated departures for February, 1915.

Districts.	Temperature.			Precipitation.			Cloudiness.		Relative humidity.	
	General mean for the current month.	Departure for the current month.	Accumulated departure since Jan. 1.	General mean for the current month.	Departure for the current month.	Accumulated departure since Jan. 1.	General mean for the current month.	Departure from the normal.	General mean for the current month.	Departure from the normal.
	°*F.*	°*F.*	°*F.*	*In.*	*In.*	*In.*			*P. ct.*	*P. ct.*
New England	30.0	+ 4.2	+ 8.7	3.62	+0.30	+2.40	6.1	+0.8	76	+ 1
Middle Atlantic	37.2	+ 4.5	+ 7.6	3.76	+0.50	+2.40	5.8	+0.3	73	− 1
South Atlantic	48.1	+ 1.4	+ 2.7	2.39	−1.70	0.00	5.0	−0.3	71	− 5
Florida Peninsula	64.8	− 2.1	− 2.1	3.44	+0.90	+3.60	5.2	+0.9	76	− 4
East Gulf	50.6	− 0.3	− 1.0	4.01	−0.80	+1.30	5.2	−0.4	70	− 6
West Gulf	52.8	+ 3.1	+ 3.0	2.47	−0.30	−0.60	5.1	−0.5	71	− 3
Ohio Valley and Tennessee	40.4	+ 4.7	+ 4.2	1.88	−1.70	−0.90	6.7	−0.5	72	− 2
Lower Lakes	29.7	+ 5.0	+ 5.3	2.10	−0.40	+0.20	7.0	+0.2	80	0
Upper Lakes	26.7	+ 7.5	+ 7.5	2.09	+0.40	+0.20	7.0	+0.7	83	+ 1
North Dakota	18.4	+11.4	+13.6	0.58	0.00	−0.40	6.9	+1.9	86	+ 6
Upper Mississippi Valley	33.2	+ 8.6	+ 7.9	2.52	+0.80	+1.20	6.8	+1.6	80	+ 3
Missouri Valley	31.5	+ 2.5	+ 8.7	2.61	+1.60	+2.20	6.7	+1.5	85	+10
Northern slope	27.2	+ 5.7	+ 6.4	0.77	0.00	−0.60	5.6	+0.5	75	+ 4
Middle slope	38.3	+ 6.0	+ 7.8	2.20	+1.40	+1.50	5.4	+1.0	69	+ 2
Southern slope	48.4	+ 3.8	+ 2.7	0.96	+0.10	+0.40	3.9	−0.9	56	−13
Southern Plateau	42.8	− 2.0	− 5.1	0.78	+0.10	+1.00	3.7	+0.1	60	+16
Middle Plateau	35.9	+ 2.9	+ 1.3	1.55	+0.40	+0.20	6.4	+1.3	72	+ 8
Northern Plateau	39.0	+ 6.9	+ 5.4	1.36	−0.10	−0.90	7.4	+1.2	72	− 3
North Pacific	44.1	+ 3.4	+ 4.7	3.84	−1.70	−3.00	7.8	+0.7	82	+ 1
Middle Pacific	49.3	+ 0.3	+ 0.6	8.14	+3.80	+6.50	7.2	+1.6	85	+ 9
South Pacific	53.7	+ 1.1	+ 2.7	5.42	+3.00	+5.30	6.1	+1.8	77	+ 8